DOCUMENT MODIFICATION REQUEST (DMR)

PAGE 1 of 5

Refer to 1 A01 PPG-001 for Processing Instructions
Printor Type All Information (Except Signatures)

1 Date	25.
7/11/95	DMR No 95-DMR ERM-00171 7/11/95 SJL

2. Existing Document Number/Revision	3. New Document Number or Document Number if it is to be changed with this Revision
RF/ER 94-00055/ Rev 0	N/A

4 Originator Name/Phone/Pager/Location	5. Document Title
OU Project Lead/C A Bicher Ext. 9100 DP 4037 Bldg 080	Chemicals of Concern Human Health Risk Assessment

6. Document Type ☐ Procedure ☒ Other OU Technical Memo

7 Document Modification Type (Check only one) SL 7 11 95
☐ New ☐ Revision ☒ Intent Change ☒ Nonintent Change ☐ Editorial Correction ☐ Cancellation

8. Item	9 Page	10 Step	11 Proposed Modifications
1	2-31	ALL	Replace existing page 2-31 with revised page
2	N/A	Table 7-3	Replace existing table 7-3 with revised table

12. Justification (Reason for Modification EJO TP etc.)

Revisions made based on CDPHE (C. Spreng) Comments. Page 2-31 was revised to delete the reference to construction-worker exposure to subsurface soil. Table 7 3 was revised to correct the error in the risk-ratio calculation.

ADMIN RECORD

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

If modification is for new procedur or revision, list concurring disciplines in Block 13, and enter N/A in Blocks 1 and 15. If modification is for any type of change or cancellation, organizations re listed in Block 13, then Concurror prints, and signs in Block 14 and dates in Block 15

13. Organization	14 Print, Sign (if applicable)	15 Date (if applicable
OU 5 Team Lead	EC Mast 7/11/95 EC Mast	
OU 5 Proj Lead	Carol Bicher 7-11-95	
ER/QA	7 11 95 (SL) S LUKER	

16 Originator's Supervisor (print/sign/date)
E. C. Mast 7/11/95

17 Assigned SME/Phone/Pager/Location	18. Cost Center	19. Charge Number	20. Requested Completion Date	2 Effective Date
WIN CHROMEC	0203 AR	N/A	7 11 95	

22. Accelerated Review?	23.ORC Review
Yes ☐ No ☒	N/A

24 Responsible Manager (print/sign/date)
C A. Bicher 7 11-95

REVIEWED FOR CLASSIFICATION / UCNI
BY _____
DATE _____

RF-47940 (5/93)

A 0005-000517

Table 2 11 RFETS OU5 PCOCs With No EPA Established Toxicity Criteria Listed by Medium

PCOC	Surface Soil	Subsurface Soil	Groundwater	Seep Water	Seep Sediment
B nz (g h)p rvl	X	X			
D b nz furan	X	X			
Lead	X	X	X		
M thylnaphthyl n	X	X			
Ph na thre	X	X	X		X
S l			X		
1 1 1 Tri hloroeth				X	

2 7 EVALUATION OF RISK BASED CONCENTRATIONS FOR INFREQUENTLY DETECTED ANALYTES AND IDENTIFICATION OF SPECIAL-CASE COCS

Analytes detected infrequently (in less than five percent of all samples in the medium) are not characteristic of OU wide contamination and the potential for exposure is low These constituents were further screened to include any infrequently detected analyte that could contribute significantly to risk if routine exposure to a hot spot were to occur In this analysis maximum measured concentrations were compared to screening levels equivalent to 1 000 times risk based concentrations (RBCs) DOE 1995

For screening purposes RBCs were defined as analyte concentrations associated with an excess cancer risk of 1E 06 (one in one million) or a hazard index of one for noncarcinogenic effects assuming residential exposure to surface soil and groundwater Any infrequently detected analyte measured at a concentration greater than 1 000 times the respective RBC was identified as representing a potentially significant health risk if exposure were to occur and was included in the list of special-case COCs for evaluation in the risk assessment

RBCs have been calculated specifically for RFETS and are presented in DOE (1995) These values referred to as PPRGs in the DOE (1995) document, are used in this identification of special-case COCs RBCs for chemicals in soil were calculated for residential receptors assuming multiple pathway exposure [ingestion inhalation of particulates and volatile organic compounds (VOCs) and external radiation exposure] RBCs for chemicals in groundwater were calculated for residential use assuming ingestion of water and inhalation

T bl 7 3
RFETS OU5
C t to /To ity S f
C rc g 1 S p Wat r

PCOC	Maximum Concentration (mg_L/L)	Slope Factor (mg_L/kg_L day)$^{-1}$ (a)	Type of Slope Factor (b)	Chemical specific Risk Factor (Ri)	Ratio of Ri/Rj	Percentage of Total Risk Factor	Consider a COC?
Carcin gens							
1,1 D hloroeth n	4 00E 03	1 20E+00	1	4 80E 03	7 58E 01	75 79%	Y s
T trachl roetl ene	2 80E 02	5 20E 02	o	1 46E 03	2 30E 01	22 99%	Y
Trichl >roethene	7 00E 03	1 10E 02	o	7 70E 05	1 22E 02	1 22%	Y s
		T xtal Ri k Fact (Rj)	=	6 33E-03	Total % =	100%	

N t
( ) Tl e t r tricti f the oral or inhalation lope facto is sed
(l) = al 1 = h lati n

Arsenic Concentration Le ls (ug/l) t Groundw ter Sampling Locations

Spring, 1992

Concentration Levels (ug/l)

00

.01 00

.01 00

0.00

Standard Map Features

Building other structures

Lakes and ponds

Streams, ditches, other drainage features

Fences

Rocky Flats boundary

Paved roads

Dirt roads

Department of Energy
Rocky Flats Environmental echnology Site

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